

Title (en)
FLOW CONTROL OF AN INJECTION MOLDING SYSTEM

Title (de)
FLUSSSTEUERUNG EINER SPRITZGIESSMASCHINE

Title (fr)
RÉGULATION DE FLUX D'UN SYSTÈME DE MOULAGE PAR INJECTION

Publication
EP 3753703 B1 20220511 (EN)

Application
EP 19207345 A 20191106

Priority
US 201916444677 A 20190618

Abstract (en)
[origin: EP3753703A1] Injection molding system comprising at least one first actuator-system (D1,D2,D3), the first actuator system comprising :- a least one piston drive (10) having at least two pressure line connectors (CP2, CP3) to drive a piston to open or close a molding nozzle,- pressure lines (L1, L2) connectable to a change over valve (V) having a pressure line connector (P) and tank line connector (T) and at least two change over pressure line connectors, wherein the first change over valve pressure line connector (CV1) is connectable to a first pressure line (L1) and the second change over valve pressure line connector (CV2) is connectable to a second pressure line (L2), wherein the second pressure line (L2) is connected to the second pressure line connector (CP2) of the piston drive (10),- an electronically adjustable flow control valve (20) having a first pressure line connector and a second pressure line connector, wherein the first pressure line connector of the adjustable flow control valve being connected to the first pressure line (L1) to allowing a connection to the first pressure line connector (CV1) of the change over valve (V), and the second pressure line connector is connected to a third pressure line (L3) which establishes a connection to the second pressure line connector (CP3) of the piston drive (10),- at least one electronic flow sensor for (P1, P2, P3) sensing flow rate in the first, second and/or third pressure lines (L1, L2, L3),- a controller connected to the adjustable flow control valve and to the at least one sensor, configured to electronically adjust the flow control valve, depending on information of the at least one sensor, controlling thereby the timing and the speed of the movement of the piston and the molding nozzle.

IPC 8 full level
B29C 45/28 (2006.01); **B29C 45/82** (2006.01); **B29C 45/00** (2006.01)

CPC (source: CN EP IL KR US)
B29C 45/2703 (2013.01 - CN); **B29C 45/2708** (2013.01 - CN); **B29C 45/2803** (2013.01 - CN); **B29C 45/281** (2013.01 - CN EP IL KR); **B29C 45/30** (2013.01 - IL US); **B29C 45/7613** (2013.01 - CN); **B29C 45/766** (2013.01 - KR); **B29C 45/7666** (2013.01 - KR); **B29C 45/77** (2013.01 - KR); **B29C 45/82** (2013.01 - EP IL KR); **F16K 1/52** (2013.01 - IL US); **F16K 21/185** (2013.01 - IL US); **G05D 16/2097** (2018.12 - IL KR US); **B29C 2045/0032** (2013.01 - EP IL KR); **B29C 2045/2709** (2013.01 - CN); **B29C 2045/2817** (2013.01 - EP IL KR); **B29C 2045/2824** (2013.01 - IL KR US); **B29C 2045/7606** (2013.01 - CN); **B29C 2945/76056** (2013.01 - EP IL KR); **B29C 2945/7606** (2013.01 - EP IL KR); **B29C 2945/76307** (2013.01 - EP IL KR); **B29C 2945/76381** (2013.01 - EP IL KR); **B29C 2945/76538** (2013.01 - EP IL KR); **B29C 2945/76785** (2013.01 - EP IL KR); **B29C 2945/76859** (2013.01 - EP IL KR); **B29C 2945/76933** (2013.01 - EP IL KR); **B29C 2945/76943** (2013.01 - EP IL KR); **F16K 1/52** (2013.01 - KR); **F16K 21/185** (2013.01 - KR)

Designated contracting state (EPC)
AL AT BE BG CH CY CZ DE DK EE ES FI FR GB GR HR HU IE IS IT LI LT LU LV MC MK MT NL NO PL PT RO RS SE SI SK SM TR

DOCDB simple family (publication)
EP 3753703 A1 20201223; **EP 3753703 B1 20220511**; **EP 3753703 B9 20220817**; BR 112021025557 A2 20220201; CA 3143148 A1 20201224; CN 114025937 A 20220208; ES 2920358 T3 20220803; IL 288942 A 20220201; JP 2022537402 A 20220825; KR 20220020880 A 20220221; MX 2021015910 A 20220426; PT 3753703 T 20220711; US 11718005 B2 20230808; US 2020398468 A1 20201224; US 2023321881 A1 20231012; WO 2020256999 A1 20201224

DOCDB simple family (application)
EP 19207345 A 20191106; BR 112021025557 A 20200609; CA 3143148 A 20200609; CN 202080044850 A 20200609; ES 19207345 T 20191106; IL 28894221 A 20211213; JP 2021575978 A 20200609; KR 20227000380 A 20200609; MX 2021015910 A 20200609; PT 19207345 T 20191106; US 201916444677 A 20190618; US 2020036774 W 20200609; US 202318208062 A 20230609